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AMERICA'S POVERTY FIGHTING NETWORK

ACCESS TO SOLAR ENERGY: AN UPDATE AND CAUTIONS

Meg Power, Policy Advisor to CAP

Keith Kueny, Community Action Partnership of Oregon

John Howat, National Consumer Law Center

Weatherization Leveraged Partnerships Project

Funded by the Department of Energy to offer training and assistance to WAP subgrantees and their associations in designing private partnerships and programs that leverage the WAP.

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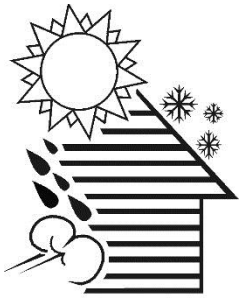

Weatherization Works

DOE Wanted:

- Input on “Weatherization Assistance & Solar Energy”
- EOS research → “Community Action and Renewable Energy”

EOS
economic opportunity studies

https://communityactionpartnership.com/energy-partnerships/

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Local Weatherizers' Objectives

For families:

- Lower total bill immediately
- Long-term positive benefit
- Simplicity
- Efficiency first, renewables second

https://communityactionpartnership.com/energy-partnerships/

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Yes We Can!

[Use WAP for Rooftop Solar]

- As a “Pilot Project” in State Plan
  - Using DOE-developed SIR Analysis
  - Like CO. [est. 100 per year]

https://communityactionpartnership.com/energy-partnerships/

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More Local Weatherizers' Objectives

For Communities

- High Impact
- New Community Asset
  - (must work with LMI housing)
- Simple life cycle administration

https://communityactionpartnership.com/energy-partnerships/

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What WAP Agencies Say is Needed:

- Companion to/secondary to whole-house WAP
- Network provider [to use WAP info system, quality control]
- Preference for scale projects, community impact.
- Greatest interest: access to renewable energy as a **CAP service**

https://communityactionpartnership.com/energy-partnerships/

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CAP/WAP Locals

Have a long history of opportunistic solar!

https://communityactionpartnership.com/energy-partnerships/

DOE & Other Resources

- Short list on APP and website soon
  - Understanding, deciding, and designing programs

https://communityactionpartnership.com/energy-partnerships/

Next Steps

- Webinar on Low-Income Community Solar?
- Other Webinars?
- Templates?
- Peer Connections?
- Let us know what is needed!

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This presentation was created by the National Association of Community Action Agencies – Community Action Partnership, in the performance of the U.S. Department of Energy, Energy Efficiency and Renewable Energy Grant Number, EE0008051. Any opinion, findings, and conclusions, or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the U.S. Department of Energy, Energy Efficiency and Renewable Energy.

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Access to Solar: Equity and Consumer Protection Cautions

Net Metering, Alternate Pricing Approaches, Consumer Protections and Disclosures

NCLC® NATIONAL CONSUMER LAW CENTER®

John Howat – National Consumer Law Center
2018 CAP Convention
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Some opening assumptions and principles

- There is a pressing need for an equitable transition from fossil fuel fired electricity generation to cleaner, ideally indigenous sources of clean energy.
- Least-cost green energy is the way to go.
- Equity in allocation of both the costs and benefits of the transition to new energy systems needs to be front and center in the debate and planning for the transition.

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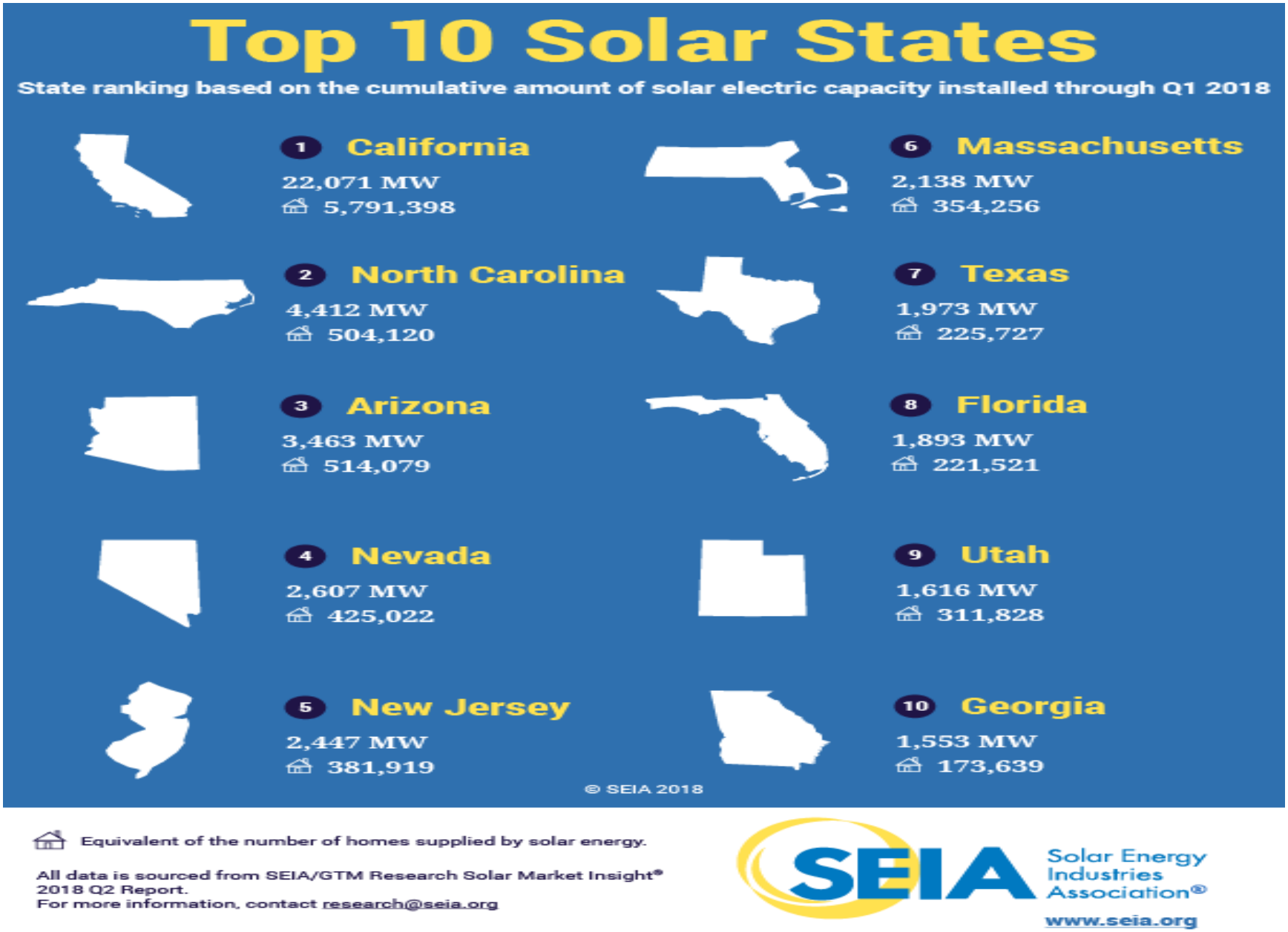
Top 10 Solar States
State ranking based on the cumulative amount of solar electric capacity installed through Q1 2018
1 California
22,071 MW
5,791,398
2 North Carolina
4,412 MW
504,120
3 Arizona
3,463 MW
514,079
4 Nevada
2,607 MW
425,022
5 New Jersey
2,447 MW
381,919
6 Massachusetts
2,138 MW
354,256
7 Texas
1,973 MW
225,727
8 Florida
1,893 MW
221,521
9 Utah
1,616 MW
311,828
10 Georgia
1,553 MW
173,639
© SEIA 2018
Equivalent of the number of homes supplied by solar energy.
All data is sourced from SEIA/GTM Research Solar Market Insight®
2018 Q2 Report.
For more information, contact research@seia.org
SEIA
Solar Energy Industries Association®
www.seia.org

Rooftop solar and net metering

- Pricing of “excess” generation for small scale solar generators
  - Generators paid the full retail rate for kWh provided to the grid
  - Usually much higher than price of wholesale renewable wind or solar energy
  - Adopted in may states as a means of jump-starting the “distributed” solar industry

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Frequently-voiced net metering concerns

- Attractive pricing and ability to bypass paying fair share of the costs of the utility grid are extended to wealthier homeowners, not most lower-income households (Cross-subsidy from lower-income households to higher-income households)
- Distributed solar generators are more dependent on the grid than non-generators
- In some states, the solar industry is well-established and net metering is no longer needed
- Levelized cost of central solar or wind – even with storage capacity – is a fraction of the levelized cost of rooftop solar (Lazard 2018)

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Solar projected to be a small part of the total US renewable energy generation mix

31.4%	**DG Solar as a Percentage of Total Solar Gen**
0.3% **7.7%**	DG Solar as a Percentage of Total Util Gen All Solar as a percentage of total projected renewables in 2040

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Reasonable pricing for distributed solar generation based on

- Time of generation
- Location of generation – capacity constraints
- Value of carbon reduction and air pollution benefits
- Value of avoided generation and transmission costs

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Consumer protection concerns

- Enhance consumer protections with respect to financing, installation and operation of solar panels.
  - Registration and licensing of vendors
  - Disclosures – financing, leasing, installation and maintenance
  - Terms for purchase and sale of electricity
  - Sales/marketing conduct
  - Customer complaints and reviews
  - Enforcement

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Low-Income Solar (Pitfalls &) Opportunities

Keith Kueny

The Community Action Partnership of Oregon

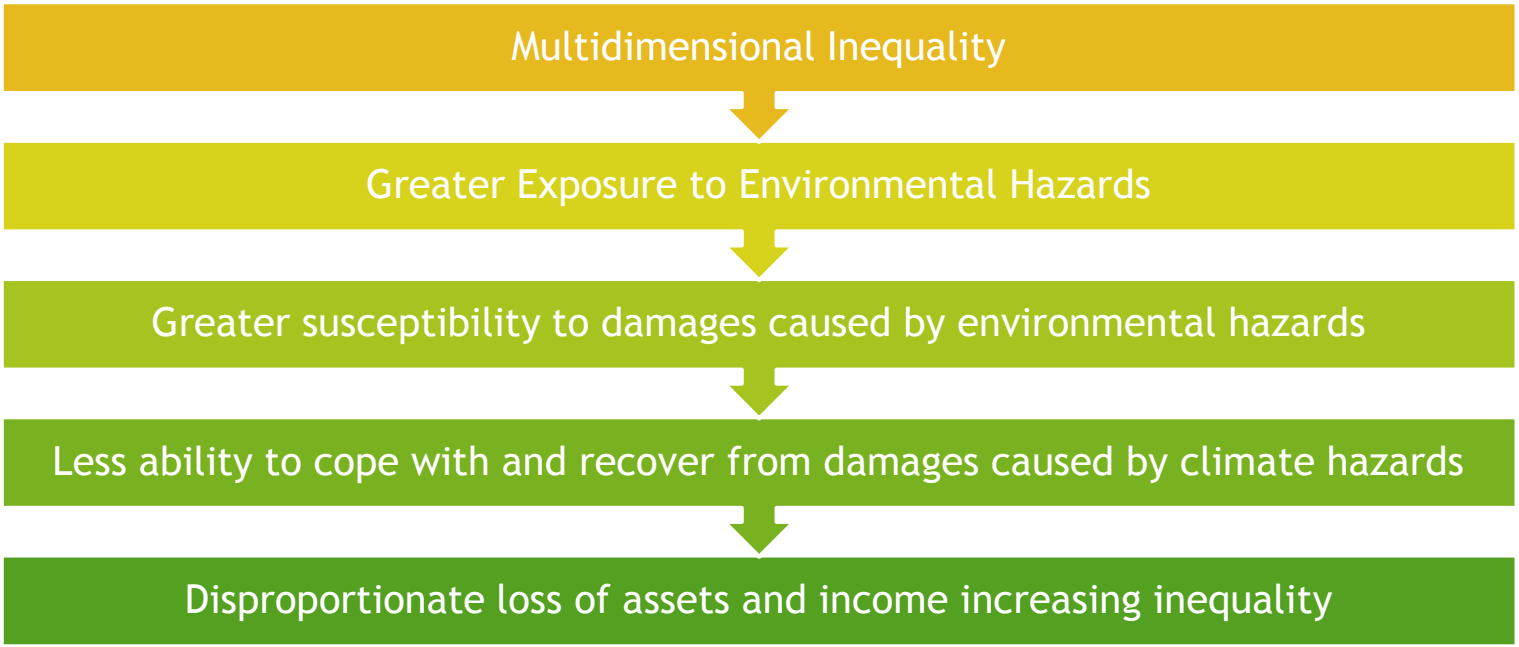
How should solar be delivered to low-income households?

It's Complicated

Climate Change will impact low-income homes most

Inequality has been a persistent issue in the climate change discussion. In general, it has been part of the discussion on “climate justice” issue, which in turn is a particular case of the “environmental justice” issue

Furthering the Divide



Forging an Equitable path

- Utilities have a duty to purchase least-cost resources
- Is the goal clean energy or ending the current utility model?
- Utility Scale is always cheaper
- Use of WAP and LIHEAP

Solar Policy Terms

- Net Metering – Solar policy that allows solar customers to sell electric back to the grid and allowing the customer to "zero" their bill. These customer use the distribution system twice as much and, at times, do not pay for the cost to distribute solar energy, leaving those costs on the rest of ratepayers, i.e. low-income ratepayers. Most solar customers are moderate to high income earners.
- Feed-in Tariffs – a tariff that is placed on solar customers to access the grid
- Fixed Charges – charges that are static and do not change. Can be for pre-paid meters or for solar installations.
- Community Solar – Utility-scale solar installations that incorporates shared ownership, while providing virtual metering benefits.
- Renewable Portfolio Standard (RPS) – a compliance mechanism that utilities must meet. In Oregon, 50% renewable by 2050, excluding hydro

Bigger is Better

- Utility Scale is 1/3 the cost to build than rooftop
- Community Solar in Oregon
  - 10% low-income mandate
  - 5% paid by developers
  - Cost socialized by industry
  - Low-income customers will receive a free subscription

Rooftop Solar

- Can use the DOE/WAP tool
- Can cause issues with roofs
- PACE
- Costs the utility more: More transformers, heavier use of the distribution system
- Expensive for roof repair or replacement
- Little secondary benefits like wx, healthier homes

DOE Pre-Approved

- GOAL: To connect affordable housing to community solar projects. This will allow projects to bypass lengthy customers acquisition periods and apply benefits directly to a low-income housing unit.
  - Site at HUD housing
  - Virtual Net Metering
  - Still waiting on state approval
  - DOE confirmed it would allow DOE-WAP

Rose City

Resource	Role	Investment
Rose CDC	Affordable Housing Developer/ Project Oversight as the property manager	Roof and residential access
Oregon Housing and Community Services/ CAPO	State administrator of LIHEAP and DOE-WAP/ Contributor/ Program Development	$51,000
Bonneville Environmental Foundation	Contributor/ Program Development	$30,000
Energy Trust of Oregon	Paying above market costs	$21,000

SOLAR DETAILS			
Installed kW	48.3	Cost	$ 130,410
$/W Installed Cost	2.7	ETO Rebate	$ 29,000
Degradation	0.5%	Tax Credit	
Solar kWh/yr	51,919	Remainder	$ 51,410.00
O&M $/kW/yr	$ 16	Mult Co. Grant	
		Meyer Grant	$ 50,000.00
		OHCS Request	**$ 51,410**

TENANT ECONOMICS	
Number of Units	17
Solar Units (30-40% AMI)	17
1BR UA/Mo.	$ 99.00
Solar Savings/Unit	$ 198.87
Solar Savings/Mo.	$ 16.57
Utility Savings/Mo.	17%

ENERGY SAVINGS BREAKDOWN					
Year	kWh Rate	Solar kWh	Energy Value	O&M Cost	Tenant Savings
1	$ 0.0800	51,919	$ 4,154	$ 772.80	$ 3,380.72
2	$ 0.0800	51,659	$ 4,133	$ 772.80	$ 3,359.95
3	$ 0.0800	51,401	$ 4,112	$ 772.80	$ 3,339.29
4	$ 0.0800	51,144	$ 4,092	$ 772.80	$ 3,318.73
5	$ 0.0800	50,888	$ 4,071	$ 772.80	$ 3,298.27
6	$ 0.0800	50,634	$ 4,051	$ 772.80	$ 3,277.92
7	$ 0.0800	50,381	$ 4,030	$ 772.80	$ 3,257.66
8	$ 0.0800	50,129	$ 4,010	$ 772.80	$ 3,237.51
9	$ 0.0800	49,878	$ 3,990	$ 772.80	$ 3,217.46
10	$ 0.0800	49,629	$ 3,970	$ 772.80	$ 3,197.51
11	$ 0.0800	49,381	$ 3,950	$ 772.80	$ 3,177.65
12	$ 0.0800	49,134	$ 3,931	$ 772.80	$ 3,157.90
13	$ 0.0800	48,888	$ 3,911	$ 772.80	$ 3,138.25
14	$ 0.0800	48,644	$ 3,891	$ 772.80	$ 3,118.69
15	$ 0.0800	48,400	$ 3,872	$ 772.80	$ 3,099.24
16	$ 0.0800	48,158	$ 3,853	$ 772.80	$ 3,079.88
17	$ 0.0800	47,918	$ 3,833	$ 772.80	$ 3,060.61
18	$ 0.0800	47,678	$ 3,814	$ 772.80	$ 3,041.45
19	$ 0.0800	47,440	$ 3,795	$ 772.80	$ 3,022.37
20	$ 0.0800	47,202	$ 3,776	$ 772.80	$ 3,003.40
21	$ 0.0800	46,966	$ 3,757	$ 772.80	$ 2,984.52
22	$ 0.0800	46,732	$ 3,739	$ 772.80	$ 2,965.73
23	$ 0.0800	46,498	$ 3,720	$ 772.80	$ 2,947.04
24	$ 0.0800	46,265	$ 3,701	$ 772.80	$ 2,928.44
25	$ 0.0800	46,034	$ 3,683	$ 772.80	$ 2,909.93
	TOTAL	**1,223,001**	**$ 97,840**	**$ 19,320**	**$ 78,520**

Questions?

Keith.@caporegon.org